Demographic Influences on Consumer Ethnocentrism: A Two-Study Analysis Demonstrating How Industry-Specific Personal Characteristics Impact the Occupation, Education, Marital Status, Sex and Race Dynamic

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Two national surveys were conducted in the United States to test the influence of seven demographic variables on consumer ethnocentrism. Study 1 suggests a social class influence (education and occupation) on consumer ethnocentrism towards automobile brands in the United States, plus a significant relationship between marital status and consumer ethnocentrism. Study 2 tests the impact of U.S. automobile industry-specific knowledge, beliefs, and job-related behavior on ethnocentrism using similar demographic variables. Without considering industry-specific measures, occupation again significantly impacts consumer ethnocentricity among participants. However, when industry-specific measures are included, the underlying influence of gender and race on consumer ethnocentrism is revealed.

INTRODUCTION

Consumers who view their home country's products as inherently superior to those produced abroad demonstrate higher levels of ethnocentrism compared to their fellow citizens who are more accepting of imported brands. Negative emotions toward a foreign country (e.g., animosity) is known to influence consumer ethnocentricity (Hoffmann, Mai, & Smirnova, 2011), yet positive emotions toward a foreign country (e.g., affinity) could also help shape ethnocentric tendencies (Oberecker & Diamantopoulos, 2011). Many individuals could in fact prefer global brands over domestic products (Nijssen & Douglas, 2011). Consumer ethnocentrism impacts an individual's beliefs (cognition), feelings (affect), and behavior (conation) in ways that are known to influence purchase decisions (Sharma, 2015). Importantly, however, consumer ethnocentrism is not just concerned with purchase decisions; it also reflects how an individual thinks, feels, and acts regarding domestic employment opportunities and the economic well-being of his or her fellow citizens (Rhiney, Arnold, & Salley-Toler, 2013). Consumer ethnocentrism acts much like religious beliefs or attitude toward race, and reflects a person's identity and sense of belonging to a specific social or cultural group. Once established, an individual's ethnocentric orientation will normally endure through his or her adult lifecycle barring some phenomenon that disrupts or changes that consumer's socialization characteristics (Shimp, 1984). The link between an individual's social class and his or her consumer ethnocentricity is empirically well established (Shimp & Sharma, 1987).

Consumer ethnocentrism is influenced by four primary categories of variables: Socio-psychological, political, economic, and demographic (Shankarmahesh, 2006). Various combinations of demographic variables have been reported to influence ethnocentric tendencies (e.g., Bilkey & Nes, 1982; Carpenter, Moore, Alexander, & Doherty, 2013; Han & Terpstra, 1988). A study of respondents across eight nations found significant differences across samples regarding the sets of demographic antecedents to consumer ethnocentric dispositions in each country (Cleveland, Laroche, & Papadopoulas 2009). Such divergent findings could be sample specific, caused by disparate geographical characteristics, or a result of change in consumer ethnocentric dispositions regarding imported brands over the past several decades. "Consumers in the United States are increasingly more familiar and satisfied with products originating in other areas of the world. They expect to be able to purchase and consume whatever brands are desired without guilt of putting their fellow citizens out of work" (Neese & Haynie, 2015, p. 334).

OCCUPATION AND GLOBALIZATION

Of particular interest in this analysis is occupation, given its direct link with consumer ethnocentrism. Work is critically important for human health and well-being. There are monumental shifts directly affecting the nature of work in the United States and other labor markets on practically every continent (Blustein, 2008). Contemporary societies around the world face significant public-policy challenges due to the influence of globalization and other social and economic forces changing the nature of work. Certain occupations (i.e., lower-skilled work) are harmed more by shifting jobs offshore compared to other occupations (Afxention & Kutasovic, 2011; Artuç & McLaren, 2015). Thus, occupation and consumer ethnocentrism are not merely related, they are inextricably intertwined. Although the economic impact of global trade tends to be geographically concentrated (Autor, Dorn, & Hanson, 2013; Shimp & Sharma, 1987), the phenomenon is widely known and should have a significant influence on consumer ethnocentric tendencies nationwide.

Exactly which specific set of demographic variables will be significantly related to consumer ethnocentrism here is difficult to determine based on the equivocal results reported in a multitude of previous studies. Nonetheless, across both studies, we expected to find that demographic variables, including one or more social class variables, would significantly relate to consumer ethnocentrism. Therefore, the following hypotheses are set forth for testing in Studies 1 and 2:

H1: (a) Education, (b) occupation, and (c) income will negatively influence consumer ethnocentrism.

H2:(a) Sex, (b) race or ethnicity, (c) marital status, and (d) age will influence consumer ethnocentrism.

STUDY 1

Methodology

Shimp and Sharma's (1987) 10-item CETSCALE (7-point Likert format) was adopted for Study 1 using a traditional mail survey conducted nationally in the United States. The CETSCALE is a well-known and widely-deployed measure of consumer ethnocentrism that is designed to determine a respondent's view concerning the purchase of imported brands versus brands made in America. Higher mean scores characterize the "Buy-American" disposition, whereas lower CETSCALE means are characteristic of consumers who are pro-import. The mailing list was purchased from a commercial mailing list vendor. Each questionnaire included a pre-stamped return envelope and a monetary incentive. The between-subjects design exposed each respondent to one test advertisement featuring either an American automobile brand or a foreign automobile brand. The seven demographic variables were tested simultaneously to account for shared variance. These demographic variables include: (1) sex; (2) race/ethnicity; (3) marital status; (4) age; (5) education; (6) household income, and (7) occupation. Analysis of Variance (ANOVA) is the quantitative technique used to test Hypotheses 1 and 2.

Results

The survey yielded a sample of 336 usable responses out of the 2,251 questionnaire packages distributed (see note section in Table 1 for category profiles). The resulting response rate is 14.90 percent, but 67 of these usable responses were removed from this analysis due to missing demographic data. This adjusted sample conforms reasonably well to the population at large, with the exceptions of higher education and income, and lower than expected Hispanic participation. The former is possibly a result of the method in which the original database was formed (i.e., the nature of the audience reading the media vehicles used to gather contact information), and the latter is possibly due to Hispanics reporting their race rather than their ethnicity. At least 44 of 50 states yielded participants. The states yielding the largest percentages of responses are California (10.40%), Florida (6.70%), Texas (5.20%), New York (5.20%), and Illinois (4.80%), whereas the five largest states in terms of actual population are California (12.10%), Texas (8.40%), New York (6.20%), Florida (6.20%), and Illinois (4.10%), respectively (http://www.census.gov/popclock).

The set of seven demographic variables in this model significantly influence CETSCALE means (see Table 1 Corrected Model, $p < .01$). Reliability for the 10-item single-factor CETSCALE measure is strong (Cronbach's alpha = .92). Adjusted R^2 is .15, indicating that these demographic variables account for a small but significant percentage of the total influence. This result is to be expected given the more inclusive array of variables previously noted that are also known to influence consumer ethnocentrism (e.g., socio-psychological, political, economic), of which demographics is only one dimension (Shankarmahesh, 2006). Statistical results presented in Table 1 indicate that only three of the seven demographic variables included in the model significantly influence the formation of consumer ethnocentrism: education ($p = .03$), occupation ($p = .02$), and marital status ($p = .05$). Based on Partial Eta Squared (partial η^2) results, occupation is responsible for the largest effect size after the other variables are partialled out (partial $\eta^2 = .08$), followed by education (partial $\eta^2 = .04$) and marital status (partial $\eta^2 = .03$). Thus, support for H1a (education), H1b (occupation), and H2c (marital status) is found. No support is found for H1c (household income), H2a (sex), H2b (race or ethnicity), or H2d (age).

TABLE 1
ANOVA OF CETSCALE ACROSS DEMOGRAPHIC CATEGORIES FOR STUDY 1

Source	Type III SS	*df*	Mean Square	*F*	Partial η^2
Corrected Model	130.80	29	4.51	2.56**	.24
Intercept	425.70	1	425.70	241.83**	.50
Sex	5.02	1	5.02	2.85	.01
Race or Ethnicity	11.56	5	2.31	1.31	.03
Marital Status[d]	10.69	2	5.34	3.04*	.03
Age[e]	1.83	3	0.61	0.35	<.01
Education[f]	18.73	4	4.68	2.66*	.04
Household Income[g]	1.11	4	0.28	0.16	<.01
Occupation[h]	38.38	10	3.84	2.18*	.08
Error	420.73	239	1.76		
Total	5408.76	269			
Corrected Total	551.53	268			

Note. $N = 269$. SS = sum of squares; *df* = degrees of freedom; Corrected Model: $R^2 = .24$ (Adjusted $R^2 = .15$); Sex: 1 = Female ($n = 157$), 2 = Male ($n = 112$); Race or Ethnicity: 1 = African American ($n = 30$), 2 = Asian American ($n = 6$), 3 = Caucasian ($n = 205$), 4 = Hispanic or Latino ($n = 10$), 5 = Native American ($n = 8$), 6 = Other ($n = 10$); Marital Status: 1 = Never Married ($n = 45$), 2 = Married ($n = 160$), 3 = Other ($n = 64$); Age: 1 = 18-25 Years ($n = 15$), 2 = 26-40 Years ($n = 51$), 3 = 41-65 Years ($n = 161$), 4 = Over 65 Years ($n = 42$); Education: 1 = High School ($n = 111$), 2 = Bachelor's Degree ($n = 71$), 3 = Master's Degree ($n = 38$), 4 = Doctorate ($n = 13$), 5 = Other ($n = 36$); Household Income: 1 = Under $25,000 ($n =$

43), 2 = $25,000-$49,999 (n = 68), 3 = $50,000-$74,999 (n = 71), 4 = $75,000-$99,999 (n = 34), 5 = $100,000 or More ($n$ = 53); Occupation: 1 = Executive or Managerial (n = 22), 2 = Professional (n = 47), 3 = Marketing or Sales (n = 24), 4 = Education (n = 18), 5 = Secretarial or Clerical (n = 9), 6 = Construction (n = 5), 7 = Agriculture (n = 4), 8 = Manufacturing (n = 1), 9 = Transportation or Shipping (n = 13), 10 = Retired (n = 55), 11 = Other (n = 71).
* $p \leq .05$; ** $p \leq .01$.

STUDY 2

Results from Study 1 stimulated a desire to conduct a follow-up analysis that includes questionnaire item development and testing. Occupation is typically a broad, generic measure when included in a survey as a demographic characteristic. For example, in a study of skill sets within and between occupational categories, the occupation measure captured variance from other influences besides simply a person's skill set (Levenson & Zoghi, 2010). In addition, they report significant and inconsistent dispersion within occupations of skills required. Such variance in within-occupation measurement creates a need to develop industry-specific occupation measures that should be more salient to the formation of consumer ethnocentric reactions immediately after exposure to stimuli related to a specific industry. A consumer's knowledge about the American automobile industry, his or her feelings regarding the nature of this industry, and that consumer's connections to the industry through employment should account for a much larger percentage of variance in CETSCALE means immediately after being exposed to an advertisement sponsored by either a domestic or a foreign automobile brand versus a broad, generic measure of occupation. Accordingly, in Study 2 we offer an additional hypothesis:

H3: Industry-specific personal characteristics will relate to consumer ethnocentrism.

Methodology

Data were collected from an online panel through the Qualtrics response service using Qualtrics survey software. Most of the elements featured in Study 1 are reproduced in Study 2, but the race, age, and occupation demographic variables were modified. The race measure used in Study 2 is patterned after the measure reported by the U.S. Census Bureau that does not include the Hispanic category because Hispanic is an ethnicity and Hispanics can be of any race. The age category has 19 years as the lower limit instead of 18, which was used in Study 1. The occupation measure was also brought more in-line with current U.S. Census Bureau categories. Overall, however, these measures represent the same personal characteristics and are comparable between Study 1 and Study 2.

As in the first study, a between-subjects design exposed participants in the United States to a single treatment advertisement featuring either an American automobile brand or a foreign automobile brand. Although the treatments were different between Study 1 and Study 2, both studies featured the domestic versus foreign automobile stimulus and are comparable for this analysis. Demographic descriptors are not related to the treatments employed, and in-depth analysis of the advertising aspects inherent in the data is beyond the scope of this analysis. Respondents self-reported consumer ethnocentric tendencies immediately post-exposure to these test advertisements using the identical 10- item CETSCALE measure included in Study 1.

The major modification made in Study 2 is the development and inclusion of 21 novel items designed to capture knowledge (beliefs), feelings (affect), and behavior (conation) related to the U.S. automobile industry. The industry-specific content of these items is based on information provided by the Alliance of Automobile Manufacturers (2016), a major trade association commonly referred to as the Auto Alliance. Organizing these items in accordance with a hierarchy-of-effects schematic derives from information provided by Sharma (2015). Personal characteristics are extremely important in determining how employees feel and act toward their employer's brands (King & Grace, 2012). Thus, the original items developed for and included in Study 2 are designed to produce salient measures of industry-specific occupation and consumer ethnocentricity. ANOVA is used in the first part of Study 2 to test Hypotheses 1

and 2. Analysis of Covariance (ANCOVA) is used in the second part of Study 2 to test Hypotheses 1, 2, and 3.

Results

The Qualtrics panel of U.S. households resulted in a usable sample of 937 (see note section in Table 2 for category profiles). The sample profiles adequately when compared to actual population statistics for the United States. To facilitate this outcome, four quotas were implemented regarding sample selection. These quantitative goals match benchmark statistics found in the 2010 Census Briefs issued in March, 2011 (C2010BR-01 for Population Distribution and Change: 2000 to 2010; C2010BR-02 for Overview of Race and Hispanic Origin: 2010, and C2010BR-03 for Age and Sex Composition: 2010). The first quota is geographical representativeness for the percentage of U.S. residents that populate each of the four major geographical regions based on the current U.S. Census Bureau classification scheme. This equates to approximately 18.00 percent for the Northeast, 22.00 percent for the Midwest, 37.00 percent for the South, and 23.00 percent for the West. In addition, a second quota ensured the number of participants exposed to each test advertisement, which was established as a minimum of 35 each for 24 different test advertisements. The third quota is sex, which ensured approximately 49.00 percent male and 51.00 percent female respondent participation. Finally, race quotas were established as follows: 72.00 percent white, 13.00 percent black, 0.10 percent Native American, 5.00 percent Asian, 0.02 percent Hawaiian, 6.00 percent other race, and 3.00 percent two races or more.

As in Study 1, ANOVA was performed with the CETSCALE as the dependent variable and the seven demographic items simultaneously included as independent variables. The outcome of this ANOVA is displayed in Table 2, and indicates that only the occupation ($p = .04$) measure significantly influenced ethnocentric reactions across demographic categories. Occupation is also responsible for the largest effect size after the other variables are partialled out (partial $\eta^2 = .03$), with an observed power statistic of .95 exceeding the desired .80 minimum level. However, with an R^2 value of .06 (Adjusted $R^2 = .02$), this model explains very little variance in CETSCALE means reported by the sample participants. As previously noted, this is expected because many other factors other than demographics alone are known to influence consumer ethnocentrism. Nonetheless, when compared to the R^2 of .24 (Adjusted $R^2 = .15$) in Study 1, this result appears to be particularly weak. Regarding hypotheses 1 and 2, only H1b is supported, whereas H1a, H1c, H2a, H2b, H2c, and H2d are not.

TABLE 2
ANOVA OF CETSCALE ACROSS DEMOGRAPHIC CATEGORIES FOR STUDY 2

Source	Type III SS	*df*	Mean Square	*F*	Partial η^2	Observed Power
Corrected Model	97.00	39	2.49	1.43*	.06	.99
Intercept	832.83	1	832.83	478.30**	.35	1.00
Sex	2.75	1	2.75	1.58	<.01	.24
Race	14.20	6	2.37	1.36	<.01	.54
Marital Status	6.87	2	3.44	1.97	<.01	.41
Age	3.16	3	1.05	0.61	<.01	.18
Education	4.67	4	1.17	0.67	<.01	.22
Household Income	2.40	4	0.60	0.35	<.01	.13
Occupation	54.20	19	2.85	1.64*	.03	.95
Error	1561.89	897	1.74			
Total	20081.01	937				
Corrected Total	1658.88	936				

Note. $N = 937$. SS = sum of squares; *df* = degrees of freedom; Corrected Model: $R^2 = .06$ (Adjusted $R^2 = .02$); Sex: 1 = Male ($n = 460$), 2 = Female ($n = 477$); Race: 1 = White ($n = 679$), 2 = Black or African

American (n = 118), 3 = American Indian and Alaska Native (n = 8), 4 = Asian (n = 45), 5 = Native Hawaiian and Other Pacific Islander (n = 2), 6 = Some Other Race (n = 58), 7 = Two or More Races (n = 27); Marital Status: 1 = Never Married (n = 338), 2 = Married (n = 431), 3 = Other (n = 168); Age: 1 = 19-25 Years (n = 146), 2 = 26-40 Years (n = 377), 3 = 41-65 Years (n = 333), 4 = Over 65 Years (n = 81); Education: 1 = High School (n = 388), 2 = Bachelor's Degree (n = 345), 3 = Master's Degree (n = 87), 4 = Doctorate (n = 17), 5 = Other (n = 100); Household Income: 1 = Under $25,000 ($n$ = 185), 2 = $25,000-$49,999 (n = 294), 3 = $50,000-$74,999 (n = 206), 4 = $75,000-$99,999 (n = 119), 5 = $100,000 or More ($n$ = 133); Occupation: 1 = Agriculture, Forestry, Fishing, and Hunting (n = 6), 2 = Mining, Quarrying, and Oil and Gas Extraction (n = 4), 3 = Utilities (n = 4), 4 = Construction (n = 38), 5 = Manufacturing (n = 37), 6 = Wholesale Trade (n = 7), 7 = Retail Trade (n = 55), 8 = Transportation and Warehousing (n = 22), 9 = Information (n = 31), 10 = Finance and Insurance (n = 38), 11 = Real Estate and Rental and Leasing (n = 10), 12 = Professional, Scientific, and Technical Services (n = 46), 13 = Management of Companies and Enterprises (n = 11), 14 = Administrative and Support of Waste Management and Remediation Services (n = 2), 15 = Educational Services (n = 35), 16 = Health Care and Social Assistance (n = 54), 17 = Arts, Entertainment, and Recreation (n = 29), 18 = Accommodation and Food Services (n = 21), 19 = Public Administration (n = 13), 20 = Other (n = 474).
* $p \leq .05$; ** $p \leq .01$.

The second part of Study 2 entails the inclusion of covariation in the model previously described. Twenty-three original items were developed for Study 2 based on information furnished by the Auto Alliance. An initial Exploratory Factor Analysis (EFA) using a Varimax rotation was performed on these 23 items, which resulted in the three-factor solution presented in Table 3. Two of these 23 items were eliminated from further consideration due to poor factor and reliability results. Factor one (U.S. Auto Industry Employment) is formed with five items that all describe the respondent's occupation, and is the most internally consistent of the three based on a coefficient alpha score of .94. Factor two (U.S. Auto Industry Knowledge) is comprised of nine items, seven that represent the respondent's knowledge of facts about the United States automobile industry, and has a coefficient alpha score of .84. However, loaded on factor two are also two items that express a positive attitude toward foreign automobile production in the United States in terms of the jobs created for American workers. This stands in sharp contrast to the seven items that form factor three (coefficient alpha = .82). This third factor (Pro-Detroit Anti-Import) is the most emotional pro-American, anti-import variable of the three.

TABLE 3
PROFILES OF THE THREE COVARIATES IN STUDY 2

Covar	Item Num	Item	Factor Loading	Item to Total Correlation	Alpha if Item Deleted
1	1*	I work for a foreign company that creates products or services used to manufacture automobiles in the United States.	.89	.86	.92
1	2*	I am employed by a company that directly sells or markets German, Japanese, Korean, or some other foreign brand of automobile in the United States.	.90	.88	.92
1	3	I work for a traditional American automobile manufacturing company (i.e., Ford, GM, or Chrysler).	.87	.87	.92

1	4	I am employed by a dealership that sells or markets Ford, GM, or Chrysler automobile brands in the United States.	.89	.91	.91
1	5	The dealership I work for sells both U.S. and foreign automobile brands.	.90	.90	.91
2	1	You are never going to get a car made 100 percent in one country anymore.	.61	.53	.82
2	2	U.S. automobile production is now assembling parts made in foreign countries and shipped to the United States.	.70	.63	.81
2	3	Ford, GM, and Chrysler still make the largest number of passenger vehicles in the U.S., but Toyota, Honda, and Nissan are a close second.	.54	.50	.83
2	4	Several foreign automobiles assembled in the U.S. have the same percent of U.S. component parts as GM, Ford, or Chrysler.	.66	.60	.82
2	5	Today, the majority of automobiles produced in the U.S. are not manufactured in Detroit, Michigan.	.64	.57	.82
2	6	Foreign automobile companies have built the majority of their U.S. production facilities in the southeastern United States.	.63	.58	.82
2	7*	The Japanese and German automobile factories located in the United States have created hundreds of thousands of jobs for Americans, which I believe is a blessing for our economy.	.74	.57	.82
2	8*	If a Honda or a BMW is made by an American citizen working in the United States, to me that is a good thing.	.71	.60	.82
2	9	If I was shopping for a new car, I would be willing to test drive an American car brand.	.52	.40	.84
3	1	I have always been upset that foreign companies like Honda, Toyota, and Nissan have built factories in the United States.	.68	.68	.77
3	2	The only reason Japanese automobile manufacturers built their plants in the southeastern United States is to avoid higher-wage unions like the United Auto Workers (UAW), which I don't think is fair for American workers.	.63	.59	.79
3	3	I don't care what anybody else claims, Japanese and German cars like Toyota or Mercedes can never be considered "American" regardless of where they are assembled.	.62	.56	.80
3	4	In my opinion, the best automobile vehicles produced anywhere on Earth are still made in Detroit by Ford, General Motors, and Chrysler.	.79	.70	.77
3	5	If I was shopping for a new car, I would be willing to test drive a foreign car brand.	.60	.41	.81

3	6	I would recommend an American car brand to anybody.	.52	.33	.82
3	7	I am usually critical of foreign automobile brands.	.66	.65	.78

Note. *N* = 937. Covar = covariate; Item Num = item number; Covariate 1 = U.S. Auto Industry Employment; Covariate 2 = U.S. Auto Industry Knowledge; Covariate 3 = Pro-Detroit Anti-Import.
*Items are reverse coded.

Confirmatory Factor Analysis (CFA) was performed based on these three covariates and the ten-item CETSCALE measure (coefficient alpha = .93). Due to a high number of parameter estimates relative to responses, scale items were parceled using the item-to-construct balance technique (Little, Cunningham, Shahar, & Widaman, 2002). Parcels were created by first averaging the highest and lowest loading items for a given scale. Subsequent parcels were computed by averaging the next highest and next lowest loading items until the scale was completely parceled. The resulting four-factor solution (CETSCALE, U.S. Auto Industry Employment, U.S. Auto Industry Knowledge, and Pro-Detroit Anti-Import) is compared to a three-factor solution (CETSCALE, U.S. Auto Industry Employment, and U.S. Auto Industry Knowledge plus Pro-Detroit Anti-Import combined), a two-factor solution (CETSCALE and U.S. Auto Industry Employment plus U.S. Auto Industry Knowledge plus Pro-Detroit Anti-Import combined), and a solution with all four variables combined. The results displayed in Table 4. Chi-square (χ^2) statistics indicate significant differences between each of the above solutions, with the 4-factor model demonstrating the best fit from the array tested. Therefore, the analysis presented here is based on the four-factor model.

TABLE 4
CFA MODEL COMPARISONS FOR STUDY 2

Model	*df*	Δ*df*	χ^2	$\chi^2_{\text{difference}}$	CFI	SRMR	RMSEA	RMSEA 90% CI
4-factor model	48		457.32		.96	.06	.10	[.09, .10]
3-factor model	51	3	1434.77	977.45***	.87	.12	.17	[.16, .18]
2-factor model	53	5	3110.33	2653.01***	.70	.24	.25	[.24, .26]
1-factor model	54	6	5189.40	4732.08***	.50	.19	.32	[.31, .33]

Note. *N* = 937. *df* = degrees of freedom; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval.
*** $p < .001$.

The ANCOVA results presented in Table 5 reveal a significant shift between the same quantitative analysis without the three covariates (see Table 2). The occupation demographic is no longer significant (p = .37), but sex (p = <.01) and race (p = .05) are, supporting H2a and H2b. H1a, H1b, and H1c are not supported, nor are H2c and H2d. The three covariates are all significant at the $p \leq .01$ level, providing strong support for H3. The R^2 value for this model is .61 (Adjusted R^2 = .59), which is a major improvement in predictive ability over the same model without the covariates included. The observed power statistic for the corrected model with covariates is 1.00, which is an improvement over the .99 result found for the ANOVA model. Although not much gain was made in power between the two models, this is nonetheless one additional indicator that incorporating the covariates in the model is appropriate. Power statistics for the three covariates are .92, .99, and 1.00 respectively, all well above the .80 desired.

Partial eta squared (partial η^2) statistics indicate that Pro-Detroit Anti-Import exerts the single largest impact on CETSCALE means with a .46 value. In relative terms, the sequence of variables with the next

highest partial η^2 value is: occupation at .02, U.S. Auto Industry Knowledge at .02, race at .01, U.S. Auto Industry Employment at .01, and sex at .01. Thus, the generic occupation variable (Significance of F = .37) appears to have been overwhelmed by industry-specific measures that include occupation descriptors. By far the most dominant force in this model is Pro-Detroit Anti-Import, which represents (1) negative emotions toward foreign automobile manufacturing in the United States, and (2) positive emotions towards the traditional Big-Three American automobile manufacturing companies (i.e., Chrysler, Ford, and General Motors). This seems to portray more of the patriotic zeal aspect of consumer ethnocentrism instead of the job-related concern for economic conditions dimension, which itself is fully captured in U.S. Auto Industry Employment.

TABLE 5
ANCOVA OF CETSCALE ACROSS DEMOGRAPHIC CATEGORIES FOR STUDY 2

Source	Type III SS	*df*	Mean Square	*F*	Partial η^2	Observed Power
Corrected Model	1010.67	42	24.06	33.19**	.61	1.00
Intercept	0.34	1	0.34	0.47	<.01	.11
Sex	6.50	1	6.50	8.97**	.01	.85
Race	9.18	6	1.53	2.11*	.01	.76
Marital Status	2.92	2	1.46	2.02	<.01	.42
Age	4.10	3	1.37	1.88	<.01	.49
Education	1.34	4	0.34	0.46	<.01	.16
Household Income	2.44	4	0.61	0.84	<.01	.27
Occupation	14.81	19	0.78	1.08	.02	.79
Covariate 1	8.34	1	8.34	11.51**	.01	.92
Covariate 2	13.90	1	13.90	19.17**	.02	.99
Covariate 3	555.70	1	555.70	766.40**	.46	1.00
Error	648.21	894	0.73			
Total	20081.01	937				
Corrected Total	1658.88	936				

Note. $N = 937$. SS = sum of squares; *df* = degrees of freedom; Corrected Model: $R^2 = .61$ (Adjusted $R^2 = .59$); Sex: 1 = Male, 2 = Female; Race: 1 = White, 2 = Black or African American, 3 = American Indian and Alaska Native, 4 = Asian, 5 = Native Hawaiian and Other Pacific Islander, 6 = Some Other Race, 7 = Two or More Races; Marital Status: 1 = Never Married, 2 = Married, 3 = Other; Age: 1 = 19-25 Years, 2 = 26-40 Years, 3 = 41-65 Years, 4 = Over 65 Years; Education: 1 = High School, 2 = Bachelor's Degree, 3 = Master's Degree, 4 = Doctorate, 5 = Other; Household Income: 1 = Under $25,000, 2 = $25,000-$49,999, 3 = $50,000-$74,999, 4 = $75,000-$99,999, 5 = $100,000 or More; Occupation: 1 = Agriculture, Forestry, Fishing, and Hunting, 2 = Mining, Quarrying, and Oil and Gas Extraction, 3 = Utilities, 4 = Construction, 5 = Manufacturing, 6 = Wholesale Trade, 7 = Retail Trade, 8 = Transportation and Warehousing, 9 = Information, 10 = Finance and Insurance, 11 = Real Estate and Rental and Leasing, 12 = Professional, Scientific, and Technical Services, 13 = Management of Companies and Enterprises, 14 = Administrative and Support of Waste Management and Remediation Services, 15 = Educational Services, 16 = Health Care and Social Assistance, 17 = Arts, Entertainment, and Recreation, 18 = Accommodation and Food Services, 19 = Public Administration, 20 = Other; Covariate 1 = U.S. Auto Industry Employment; Covariate 2 = U.S. Auto Industry Knowledge; Covariate 3 = Pro-Detroit Anti-Import.
* $p \leq .05$; ** $p \leq .01$.

Sex, Race, and Consumer Ethnocentrism

The remaining analysis for the second part of Study 2 focuses on the sex and race demographic variables, since H2a and H2b were supported yet no support was found for the other hypotheses. Pairwise

comparisons (Significance of F values ≤ .05) are displayed in Table 6 for the sex and race demographic variables after covariance has been removed. These results show that female respondents exhibit significantly higher CETSCALE means as a group compared to their male counterparts in the sample, so the female demographic profiles are more pro-American, more anti-import when it comes to the U.S. automobile industry. As far as race, the white category is more pro-American, more anti-import than both the black or African American and American Indian or Alaska Native demographic groups. These two categories are both less ethnocentric when it comes to the U.S. automobile industry than participants who describe themselves as some other race.

TABLE 6
PAIRWISE COMPARISONS FOR CETSCALE BY SEX AND RACE IN STUDY 2

Sex or Race Category (I)	Sex or Race Category (J)	Mean Difference (I - J)	Standard Error	95% CI
Female	Male	0.19**	0.06	[0.07, 0.31]
White	Black or African American	0.24**	0.09	[0.06, 0.42]
White	American Indian and Alaska Native	0.65*	0.31	[0.05, 1.26]
Black or African American	Some Other Race	-0.32*	0.14	[-0.59, -0.04]
American Indian and Alaska Native	Some Other Race	-0.73*	0.33	[-1.37, -0.08]

Note. $N = 937$. CI = confidence interval.
* $p \leq .05$; ** $p \leq .01$.

A final set of six univariate ANOVA runs were performed to explore the relationship between sex and race and each of the three covariates. The results of these six ANOVAs are presented in Table 7. For sex, U.S. Auto Industry Employment and U.S. Auto Industry Knowledge are significantly different between male and female respondents, but not in the case of Pro-Detroit Anti-Import. For race, significant differences exist across the seven categories for U.S. Auto Industry Employment and Pro-Detroit Anti-Import, but not for U.S. Auto Industry Knowledge. To determine the specific nature of the differences detected, pairwise comparisons are made for each of the six ANOVA runs.

TABLE 7
UNIVARIATE ANALYSIS OF VARIANCE FOR SEX AND RACE BY COVARIATES

Dependent Variable	Independent Variable	Type III SS	*df*	Mean Square	*F*	Partial η^2	Observed Power
Covariate 1	Gender	94.06	1	94.06	31.38**	.03	1.00
Covariate 2	Gender	8.92	1	8.92	12.97**	.01	.95
Covariate 3	Gender	0.85	1	0.85	0.67*	<.01	.13
Covariate 1	Race	111.32	6	18.55	6.20**	.04	.99
Covariate 2	Race	4.43	6	0.74	1.06*	<.01	.42
Covariate 3	Race	20.35	6	3.39	2.71**	.02	.87

Note. $N = 937$. SS = sum of squares; *df* = degrees of freedom; Covariate 1 = U.S. Auto Industry Employment; Covariate 2 = U.S. Auto Industry Knowledge; Covariate 3 = Pro-Detroit Anti-Import.
* $p \leq .05$; ** $p \leq .01$.

The data displayed in Table 8 is only for significant ($p \leq .05$) pairwise comparisons that are positive (i.e., I > J) since negative comparisons indicate the same differences, only where I < J. These results reveal that men report more employment connections with the U.S. automobile industry (U.S. Auto Industry Employment) and are more favorable concerning foreign automobile production in the United States (U.S. Auto Industry Knowledge). Males also appear to be more knowledgeable about the U.S. automobile industry (U.S. Auto Industry Knowledge). As far as race is concerned, African Americans, Asians, and Hawaiians or Pacific Islanders all report more employment connections with the U.S. automobile industry than the white category; African Americans are also higher than some other race groups for U.S. Auto Industry Employment. The Native Hawaiian or Pacific Islander group has the highest mean for U.S. Auto Industry Employment than any other racial group, but there are only two respondents so this result should be taken with caution. Finally, the factor that represents negative feelings toward foreign automobile factories in the United States and positive feelings for traditional American automobile manufacturers (Pro-Detroit Anti-Import) demonstrates that the black or African American category is significantly higher on this dimension than the white, Asian, some other race, and two or more races groups are.

TABLE 8
PAIRWISE COMPARISONS FOR COVARIATES 1, 2, AND 3 BY SEX AND RACE

Dependent Variable	Sex or Race Category (Mean) (I)	Sex or Race Category (Mean) (J)	Mean Difference (I - J)	*S.E.*	95% CI
Covariate 1	Male (2.61)	Female (1.97)	0.63	0.11	[0.41, 0.86]
Covariate 2	Male (5.34)	Female (5.14)	0.20	0.05	[0.09, 0.30]
Covariate 1	BAA (2.99)	White (2.12)	0.87	0.17	[0.53, 1.21]
		Some Other Race (2.25)	0.74	0.28	[0.19, 1.28]
Covariate 1	Asian (2.79)	White (2.12)	0.67	0.27	[0.15, 1.19]
Covariate 1	NHPI (5.60)	White (2.12)	3.49	1.23	[1.08, 5.89]
		BAA (2.99)	2.61	1.23	[0.19, 5.04]
		AIAN (2.38)	3.23	1.37	[0.54, 5.91]
		Asian (2.79)	2.81	1.25	[0.36, 5.27]
		Some Other Race (2.25)	3.35	1.25	[0.91, 5.79]
		Two or More Races (2.39)	3.21	1.27	[0.72, 5.70]
Covariate 3	BAA (4.39)	White (4.03)	0.37	0.11	[0.15, 0.59]
		Asian (3.93)	0.46	0.20	[0.08, 0.85]
Covariate 3	BAA (4.39)	Some Other Race (3.97)	0.42	0.18	[0.07, 0.78]
		Two or More Races (3.76)	0.64	0.24	[0.17, 1.11]

Note. $N = 937$. *S.E.* = standard error; CI = confidence interval; AIAN = American Indian and Alaska Native; BAA = Black or African American; NHPI = Native Hawaiian or Pacific Islander; Covariate 1 = U.S. Auto Industry Employment; Covariate 2 = U.S. Auto Industry Knowledge; Covariate 3 = Pro-Detroit Anti-Import.

DISCUSSION

Study 1 suggests that U.S. consumers with less education are significantly more ethnocentric, implying that education benefits the marketing of foreign automobile brands in America. A pro-import orientation becomes consistently stronger as educational attainment progresses from high school through undergraduate college to graduate degrees. Considering the simultaneous influence that the occupation demographic exerts on the formation of ethnocentric tendencies, it is reasonable to believe that social class status reduces ethnocentrism in the United States. This validates what was reported in the original

CETSCALE article: The "upper-lower class is the most ethnocentric… followed by the lower-middle class… and upper-middle class" (Shimp and Sharma, 1987, p. 287). They continue that "older working-class individuals… are especially threatened by the prospects of losing jobs to foreign competitors," compared to middle and upper-middle class respondents in their study who appear to have stabilized employment situations and stronger job security (Shimp and Sharma, 1987, p. 287). Study 1 results find that the executives and managers, marketing and sales, secretaries and clerical workers, professionals, and education occupation categories are the least ethnocentric consumers, whereas the construction, agriculture, manufacturing, and transportation and shipping categories are the most ethnocentric.

The fact that marital status significantly impacted ethnocentric tendency in Study 1 is more difficult to clearly interpret. Arguably, a higher incidence of marriage among higher social class households should result in lower, more pro-import CETSCALE means. Cohabitors from the working class are less likely to eventually get married than their middle-class peers (Sassler & Miller, 2011). To the contrary, married participants in Study 1 are significantly more ethnocentric than respondents who never married.

The first part of Study 2 again determined that occupation significantly influences post-stimulus formation of consumer ethnocentric tendencies without testing for covariance, essentially replicating the results found in Study 1. However, none of the other demographic variables were significant at the $p = .05$ level in the first part of Study 2, which is moderately surprising given the wide array of demographic influences on consumer ethnocentrism reported in the literature. Although the occupation categories were modified from the first study to the follow-up analysis, the results are consistent. Traditional blue-collar occupations which depend on domestic production (e.g., construction) express higher levels of consumer ethnocentrism.

Study 2 is designed to test the notion that the generic occupation categories typically used could mask ethnocentric reactions inherent in a specific industry. All three factors formed from the original items in Study 2 do significantly influence the formation of consumer ethnocentrism. When these three covariates are included, the influence from that variance replaces occupation as a significant influence on consumer ethnocentrism, revealing sex and race as underlying demographic influences. Females demonstrate higher ethnocentrism regarding the U.S. automobile industry than males, and white respondents are significantly more ethnocentric than African American or American Indian participants. African Americans and American Indian groups are also less ethnocentric than some other race categories. However, these findings only materialize when two features of this database are accounted for statistically: (1) more men and minority groups are employed in the U.S. automobile industry, and (2) African American respondents feel more animosity toward foreign automobile production in the United States and more favoritism for traditional Big-Three automobile companies.

The uniqueness of the original items included in Study 2 that formed the U.S. Auto Industry Employment, U.S. Auto Industry Knowledge, and Pro-Detroit Anti-Import covariates precluded the development of specific hypotheses for each of them. That being said, the pretest belief was that industry-specific occupation characteristics would exert the most influence on ethnocentric reactions to foreign versus domestic automobile advertising. This is not what was found, however. To the contrary, U.S. Auto Industry Employment - which is entirely occupation based - exerts the least influence compared to the other two covariates. The negative beliefs and feelings represented by the strongest influence (Pro-Detroit Anti-Import) appear to reflect the animosity construct previously mentioned.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are limitations of these two studies. The samples under analysis here both compare reasonably well to the actual United States population, but they are not stratified random samples and could contain sample-specific results. There are very few respondents in several of the occupation categories, and the Other occupation category in Study 2 comprises approximately half of the sample size. Also, as these samples were limited to the U.S. population, the results may not generalize to other populations. This study also suggests several directions for future research. First, the industry-specific nature of the measurement items included as covariation in Study 2 highlight a need for similar research in different

industries and in different geographical areas of the world. How occupation relates to other demographic characteristics in potentially influencing the nature and intensity of consumer ethnocentrism is a worthwhile research pursuit. Additionally, different measures of social class other than education, occupation, and income are available that warrant empirical investigation to determine how they influence consumer ethnocentrism. Such variables may include personal prestige, group associations, social class consciousness, upward mobility, and political power and influence (Gilbert & Kahl, 1982).

CONCLUSION

Hypothesizing the precise array of demographic variables that will significantly influence consumer ethnocentricity in a particular study may be difficult. All or only a sub-set of the variables measured could be significant depending on the sample, the way in which each is categorized, geographical domain, or even the specific industry being studied. The two studies reported here demonstrate that occupation is a strong influence on ethnocentric dispositions regardless of the other demographic influences that may or may not be present. The commonly used occupation measure comprised of general categories might not be specific enough to fully account for the variance explained by that demographic characteristic on ethnocentrism, however, necessitating the development and use of more detailed industry-specific measures. Negative emotions towards foreign brands investing in automobile manufacturing facilities in the United States are demonstrated in this study to exert the strongest influence on consumer ethnocentrism, but when that variance is partialled out of the dependent means, other demographic influences (i.e., sex and race) that previously lay hidden are revealed.

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